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THE KOREAN PENINSULA:
FORECAST OF DEMOGRAPHIC, ECONOMIC,
AND POLITICAL TRENDS

*A Report Prepared under an Interagency Agreement
by the Federal Research Division,
Library of Congress*

SEPTEMBER 30, 1993

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PREFACE

This study examines population and economic trends in South Korea and North Korea. It discusses the effects of birth control, the aging population, and employment in the two countries. Current economic conditions and government strategies for economic development are analyzed. The vulnerability of North Korea to an economic blockade or sanctions and the impact of such an action are evaluated. Finally, two scenarios for peaceful reunification are provided, and the effects of peaceful reunification on the two Koreas, Asia and the Pacific, and the world are discussed.

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I. INTRODUCTION

In February 1993, Kim Yong Sam was inaugurated as South Korea's seventh president with a mandate to promote economic reforms to strengthen the competitiveness of South Korean industries relative to Japan, the United States, Europe, and the newly industrialized economies (NIE). South Korea's plans for the 21st century include raising the per capita gross national product (GNP--see Glossary) from US\$7,000 to US\$10,000, overcoming problems in its trade relations with the United States and Japan, and expanding exports to China, Russia, Europe, Southeast Asia, and selected countries in other regions. The country's population is projected to increase from 45.2 million persons in 1993 to 48.5 million persons in mid-2000.

South Korea's economic planning in the next decade will focus on reducing government subsidies to businesses, liberalizing laws and regulations controlling foreign business activities, restructuring banking and financial services, and promoting research and development in technologies vital to future commercial ventures. The Kim Yong Sam administration intends to gradually phase out government subsidies that have allowed South Korea's major corporations to dominate most sectors of the economy. Import liberalization and elimination of laws prohibiting foreigners from owning property or competing with South Korean firms in retail trade and protected industries are

expected to influence South Korean businesses to improve their products and services and eliminate nonproductive assets. The removal of government regulations that have controlled interest rates and limited the types of services banks offer is expected to promote the expansion of domestic and foreign financial services and to stimulate economic growth. Finally, South Korean firms will be encouraged to double their research budgets for new technologies so that South Korea will be less dependent on direct transfers of technology from Japan and the United States.

The deterioration of the North Korean economy in recent years has influenced the Kim Il Sung regime to adopt a more outward-looking economic policy. P'yöngyang is finding it difficult to keep factories fully operating, produce as much food as needed, and meet domestic demands for oil, electricity, and consumer goods. The population of North Korea is projected to increase from 22.7 million persons in 1993 to 25.5 million in 2000. North Korea no longer receives economic assistance from China and Russia, and exorbitant spending on its armed forces--estimated to be 27 percent of GNP in 1992--has precluded the modernization of civilian factories. For these reasons, the government is encouraging foreigners to invest in joint ventures in its Najin-Sönbong Free Economic and Trade Zone.

It is possible that P'yöngyang's refusal to abide by the provisions of the Treaty on the Non-Proliferation of Nuclear Weapons will cause the United Nations Security Council to impose economic sanctions or institute an economic blockade against

North Korea. Either of these measures would have a catastrophic effect on the North Korean economy. North Korean factories currently are operating at about 60 percent of capacity, and P'yŏngyang is dependent on foreign sources for the oil needed to maintain existing levels of production. International actions designed to isolate North Korea further would probably cause the government to tighten its control over the population. Kim Il Sung would almost certainly mobilize the armed forces, and it is possible that North Korea would take military action against South Korea and United Nations forces involved in a naval blockade.

Either one of the two most likely scenarios for the peaceful reunification of North Korea and South Korea would place a burden on South Korea similar to that experienced by West Germany in October 1990. In the event that Kim Il Sung's regime suddenly collapsed and Seoul had to absorb North Korea, it is estimated that South Koreans could pay as much as US\$1 trillion over 10 years to modernize North Korean industries, improve the infrastructure, and raise the standard of living of the people. A second scenario envisions a gradual movement toward an inter-Korean economic union. South Korean businesses are eager to invest in North Korea, and the expansion of these contacts might lead to increased political cooperation between P'yŏngyang and Seoul.

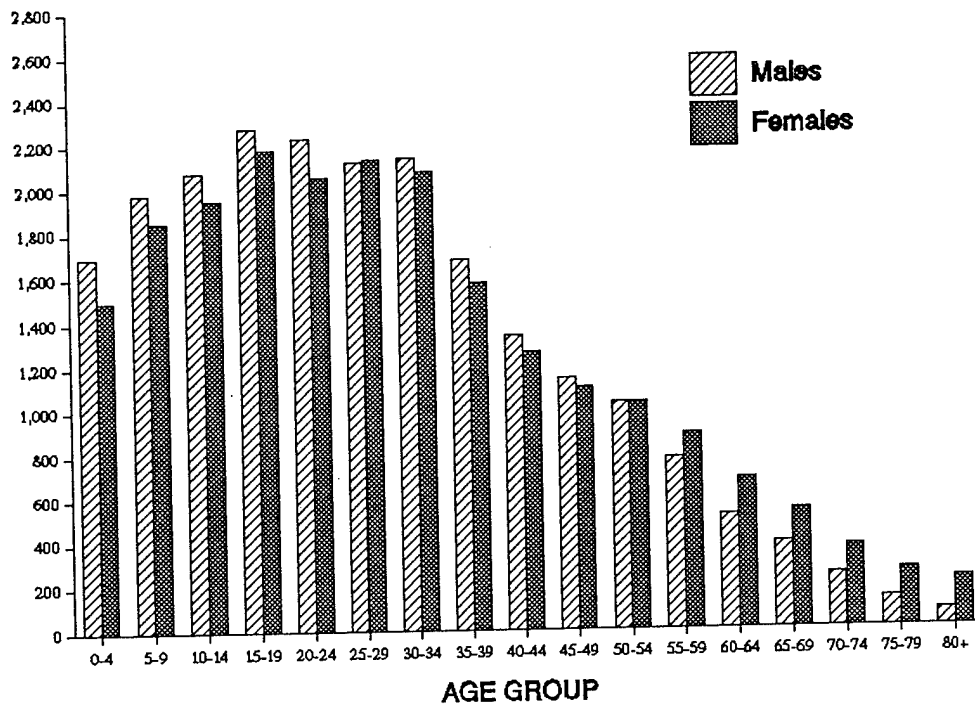
II. SOUTH KOREA

A. Population Trends

Unlike North Korea, South Korea publishes its population data annually. A population census is conducted about every five years (see table 1, Appendix).¹ Based on the 1990 census results of more than 43.5 million people, it is estimated that South Korea had a total population of about 45.2 million in July 1993, with an average annual growth rate of 1.3 percent. Men outnumbered women by a ratio of 100.8 males per 100 females in 1990. In 1980 the ratio was 100.5 males per 100 females.² This gender imbalance will rise to a ratio of 128 males per 100 females in 2010, according to South Korea's National Statistics Office, because of the continuing preference for male children. In addition, parents prefer that girls not be born in an inauspicious year according to the Korean zodiac. Abortion has been one of the means for gender control, and the decision to abort or not to abort is currently influenced by the modern technology that can reveal gender before birth.³ From 2 to 3 percent of the 1.5 to 2 million annual abortions are for reasons of gender.⁴

In 1990 the population was aging--over 7.8 percent of the total was 60 years and older, while the number of youths below 14 years old had decreased to 25.4 percent (see fig. 1). In 1980 the groups accounted for 6.1 percent and 33.8 percent of the

Figure 1. South Korea: Population by Age-Group and Sex, 1990
(in thousands)



Source: Based on information from Korea Statistical Yearbook, 1991, Seoul, Korean Statistical Association, 1991, 40-41.

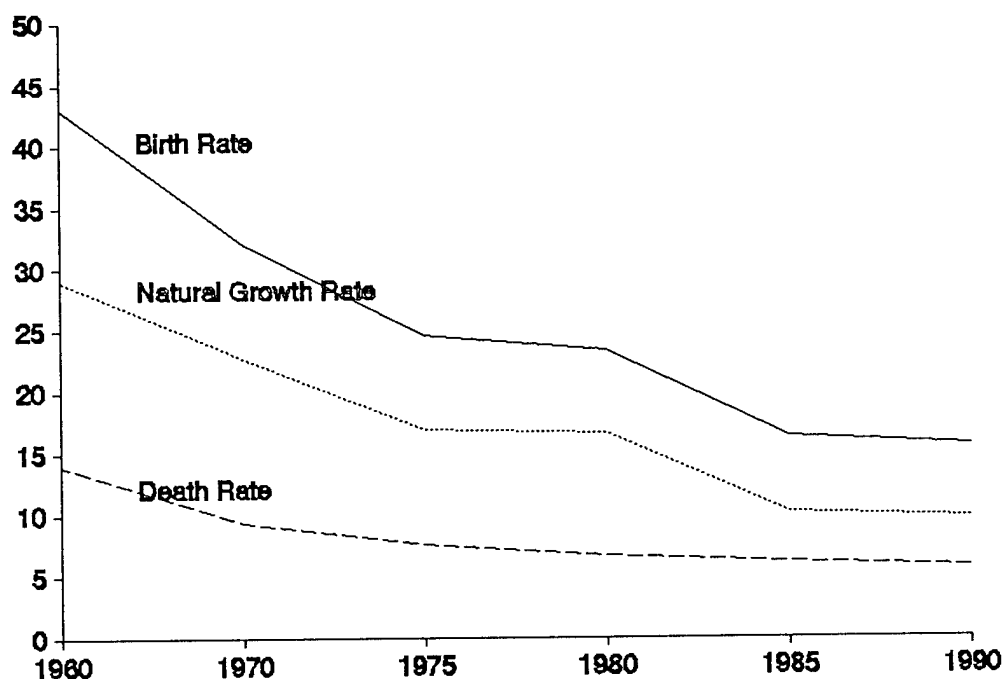
population, respectively.⁵

Because of the inherent economic stagnation and rapid population increases that hindered any sustained economic growth during the 1950s, the government issued a new population policy in 1961. The program called for a reduction of rapid growth through a nationwide fertility control program. An Overseas Emigration Law was enacted, allowing Korean farmers to settle in Latin American countries under contract agreements in 1962. At the same time, as part of the development strategy, the government decided on "overseas manpower exports"--sending

migrants without families to foreign countries under specific contract terms. This emigration law was not effective in controlling the population growth and had been virtually discontinued by 1966. But the manpower export movement, which has had some impact on fertility, has increased substantially.⁶

After 30 years of population control efforts, the growth rate was brought down from 28.8 per 1,000 in 1960 to 14.7 per 1,000 in 1990 (see fig. 2).⁷

Figure 2. South Korea: Vital Statistics, Selected Years, 1960-90
(per thousand)



Source: Based on information from Korea Statistical Yearbook, 1991, Seoul, Korean Statistical Association, 1991, 58.

The Korea Development Bank and the Korea Institute for Population and Health forecast a further decline in the population growth

rate. The annual average growth rate for the decade 1990 to 2000 was projected at 8.5 per 1,000 by the Korea Development Bank and 10.0 per 1,000 by the Korea Institute for Population and Health.^{8,9} Based on these assumptions, the population can be expected to reach 48.0 million (Korea Development Bank) or 48.5 million (Korea Institute for Population and Health) by mid-2000.

South Korea's labor force reportedly totaled about 18.0 million in 1990, representing only 60.0 percent of all persons over 15 years of age, or 42.5 percent of the total population. People in the labor force are defined as economically active and comprise both the employed and the unemployed. About 2.4 million people, including women, the handicapped, and the elderly, could be counted among the economically active but were not included.¹⁰ Of the 1990 total active population, 18.3 percent worked in agriculture, 27.3 percent in mining and manufacturing, and 7.4 in construction (see table 2, Appendix). The unemployed accounted for 2.4 percent of the economically active population.¹¹

For 1993 the unemployment rate is predicted to be 2.6 percent, the highest since 1989. Large companies promoting greater efficiency and automation introduced in industry cause the unemployment rate to rise, especially in the white-collar sector. Meanwhile, the blue-collar sector is experiencing a high percentage of manpower shortages, more than 9 percent in 1991, because people continue to avoid hard and unglamorous work. The labor shortage rate is spread out among a number of industries (see table 3, Appendix).¹² People with higher education will

have a harder time finding satisfying or suitable jobs than those with less education. The Korean Economic Planning Board predicted that in 1993 only 14.7 percent of the economically active population will work in agriculture and only 24.1 percent in mining and manufacturing, a decline from 1990 of 3.6 percent and 3.2 percent, respectively. By contrast, the construction and services sector will experience a rise in employment, from 54.4 percent in 1990 to 58.6 percent in 1993.¹³

The shortage of blue-collar workers resulted in an increase in wages by an average of 20 percent annually between 1988 and 1991. This in turn forced companies to rely more heavily on illegal aliens from low-wage countries. The government has implemented a new policy to provide 10,000 illegal aliens with work visas for on-the-job training.¹⁴ To ease the shortage of indigenous blue-collar workers, about 35,000 illegal foreigners were granted a six-month temporary permit effective January 1, 1993. About 80,000 foreigners are estimated to be working in manufacturing and service businesses.¹⁵ Some businessmen put the figure closer to 100,000 foreigners.¹⁶

B. Economic Trends

In the 40 years since the end of the Korean War in 1953, South Korea has developed from a war-devastated nation dependent on foreign aid for its economic development into one of Asia's most dynamic newly industrialized economies (NIE). The United States contributed more than US\$200 million annually from 1953 to 1965 toward rebuilding the country's infrastructure and providing

food, housing, and national security.¹⁷

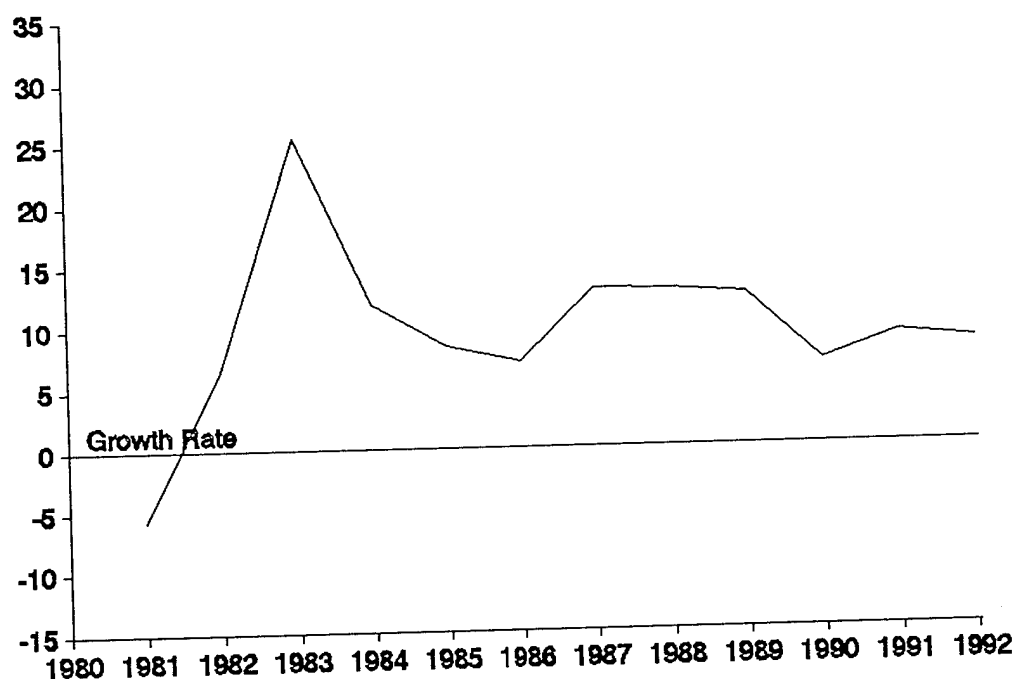
From 1961 to 1979, South Korea's economic planners promoted the construction and expansion of hundreds of industrial plants. Foreign grants and loans, primarily from the United States and Japan, were largely responsible for the growth of these businesses into multifaceted conglomerates commonly known as chaeböl (see Glossary). President Park Chung Hee, the former general who dominated South Korean politics during this 18-year period, relied on a small number of loyal industrial entrepreneurs to carry out government-directed economic development plans. For two decades, South Korea's phenomenal economic growth can be attributed to the success of the government and the chaeböl in purchasing foreign patents and technology for a variety of products and in producing the same goods at a lower cost for export.¹⁸ The government encouraged competition between the chaeböl in both the heavy industrial sector and the light industrial sector to promote domestic and foreign demand for indigenous products. Chief among these products were clothing, home appliances, small machines, industrial machines, steel and nonferrous metals, chemicals, and specialized tools for construction, medical, and several other trades.

In the 1980s, presidents Chun Doo Hwan (1980-87) and Roh Tae Woo (1988-93) encouraged the chaeböl to concentrate more on new technologies, such as computer technology, and to increase the locally produced content of its manufactured goods. South Korean

businesses were ingenious in achieving the former but had only limited success with the latter.

In 1992 South Korea's GNP grew by 4.7 percent to US\$280 billion. Although this rate of growth was better than the rates achieved by most of the developed industrial countries, it was South Korea's worst growth rate since 1980 (see fig. 3).¹⁹

Figure 3. South Korea: Growth of Gross National Product, 1980-92
(In percentages)



Source: Based on information from Martin Hart-Landsberg, The Rush to Development, New York, Monthly Review Press, 1992, 231.

South Korean and foreign economic analysts generally agree that there were three causes for the slowdown of the economy: poor management practices in the chaeböl; reduced foreign investment; and a decreased demand for South Korean products in

the United States and Japan. According to Business Korea [Seoul], few of the chaeböl owners have established international business practices for debt management, investment, and marketing. As a result, money has been lost because of inefficient plants, land speculation, and risky plans for diversification.²⁰ The decrease in foreign investment is attributed to increased labor costs concomitant with the unwillingness of advanced industrial countries, particularly the United States and Japan, to share new technologies with South Korean firms. Trade unions negotiated for wage increases averaging 16.9 percent in 1990 and 1991 and 17.4 percent in 1992, reducing cost competitiveness.²¹

Declining foreign investment by and decreased exports to the United States and Japan also affected South Korea's economy. In 1987 the United States and Japan accounted for 54 percent and 39 percent, respectively, of the total foreign investment in South Korea. By 1992 direct investment by the United States and Japan represented 21 percent and 16 percent, respectively, of the total foreign investment. Exports to the United States declined from 35.3 percent in 1988 to 25 percent in 1992. Exports to Japan declined from 19.8 percent to 15 percent in the same period.²²

In April 1993, President Kim Yong Sam outlined a five-year economic plan that emphasizes boosting exports, eliminating wasteful spending by the chaeböl, increasing research and development in selected high-technology industries, and attracting more foreign investment. The plan envisions sustaining GNP growth at 7 percent a year through 1998 and raising per

capita national income from US\$7,000 in 1992 to US\$10,000 in 1998.²³

C. Heavy Industry

Heavy industry became increasingly important to South Korea's economy in the 1980s and 1990s. It accounted for 51.6 percent of manufacturing in 1980 and had increased to 60.4 percent by 1989. Steel production increased from 14.6 million tons in 1986 to 19.5 million tons in 1991. Domestic industries surpassed foreign suppliers in satisfying the country's demand for various types of industrial machinery, heavy construction equipment, and machine tools. The number of motor vehicles produced in the country increased from 637,000 in 1985 (486,000 automobiles) to 1,495,000 in 1991 (1,130,000 automobiles). South Korea became a major world supplier of ships of all sizes, including supertankers. Production increased from 3 million gross tons in 1988 to 4.6 million gross tons in 1992. In 1980 almost 1 million tons of petrochemical products were produced; by 1991 this had increased to 3 million tons.²⁴

In 1991 heavy industrial exports accounted for 13 percent of South Korea's GNP and constituted 50 percent of total exports. Steel products, ships, petrochemicals, machinery, and automobiles together constituted 22.7 percent of total exports, valued at US\$16.2 billion.²⁵

In 1992 and the first quarter of 1993, heavy industries continued to increase output despite the slowdown in the domestic economy and the reduced demand for South Korean products in the

United States and Japan. Production increased 11.5 percent in 1992 to US\$46.3 billion and accounted for 16.5 percent of GNP. The production of all types of motor vehicles increased to 1,960,000 in 1992, with 535,000 automobiles sold abroad. Domestic demand is increasing as more South Koreans are able to afford automobiles and as import tariffs have placed foreign models out of the price range of the middle class. Steel mills and petrochemical manufacturers were producing at full capacity. Preliminary statistics for the first quarter of 1993 indicated that South Korea's successful development of new markets for heavy industrial products, particularly in China, had more than compensated for lower demand in the United States and Japan. Exports of automobiles increased by 147 percent, steel by 42 percent, and machinery by 23 percent, compared with the same period in 1992.²⁶

In the 1970s and 1980s, South Korea was successful in competing for global markets in heavy manufacturing industries because Japanese and United States companies were liberal in transferring high technology and investing in partnerships with the chaebŏl for the production of several types of heavy equipment. Between 1987 and 1991, Japan invested US\$4.1 billion in South Korean industries, of which 50 percent went to the heavy industries. The United States invested US\$2.5 billion during the same period, of which 93 percent went to the heavy industries.²⁷ In 1992, however, Japanese and United States companies significantly reduced their investment to protect the

competitiveness of their own domestic industries. Total foreign direct investment in 1992 was US\$898 million, a decrease of 36 percent from 1991.

In 1993 South Korean economic planners believed that the future success of heavy industry would depend on increasing foreign direct investment and expanding marketing networks in both developed and developing countries. South Korea will be unable to remain competitive in high- and mid-technology intensive industries without foreign support because its domestic research and development programs lack the scientific and engineering resources and capital necessary to compete with the more advanced countries. In 1992 South Korea spent US\$4.4 billion on research and development. In the United States, major corporations spend that amount each year for product development. General Motors, for example, spent US\$4.7 billion on research in 1992.²⁸

The government plans to promote new heavy industries by the year 2000 and to modernize existing ones. Seoul is particularly interested in establishing an aircraft industry. South Korea has assembled United States-produced fighter aircraft in the past and currently has plans to coproduce mid-size civil aircraft with Russia. Automotive producers will be encouraged to design and manufacture 100 percent of their automobiles. Currently, engines and transmissions are purchased abroad and assembled in South Korea. Steel and shipbuilding corporations will invest in automating more of their production lines.²⁹ The chaeböl are

being encouraged to increase investment in research from the 1993 level of 2.1 percent of their budget to 4 percent by 2000. The government will subsidize promising technologies but will not provide more than 20 percent of the funding for any project.³⁰

President Kim Yong Sam has committed his administration to deregulating controls on foreign ownership and marketing in South Korea in 274 manufacturing industries by 1997 in order to promote incentives for the United States and other countries to increase their investments in South Korea. Foreign companies will also be allowed to own and operate their own distribution networks without going through South Korean-owned subsidiaries. Seoul has advised South Korean producers that it will be up to them to improve the quality of their products to compete with imports. As part of the deregulation plan, South Korea will improve customs clearance procedures that currently hold foreign goods at ports and airports for up to three weeks. By 1994 the pier-direct customs clearance system will allow imported goods to clear customs within two days.³¹

The establishment of diplomatic relations with China, Russia, and Vietnam has promoted a dramatic growth in the export of heavy industrial goods to these countries--a trend that is expected to continue. In the first quarter of 1993, China was the second largest importer of South Korean steel products and automobiles behind the United States. Trade between the two countries is expected to expand by about 10 percent a year from US\$8 billion in 1992, with South Korea maintaining a small

surplus. South Korea's chaeböl currently are investing in the construction of various types of heavy industrial plants in China. For example, the Samsung Engineering Company is building an ethylene plant for the Jilin Chemical Industrial Company, and the Se-U Construction Company is constructing a cement plant for the Zhaoyuan Company.³²

South Korea's two-way trade with Russia was less than US\$2 billion in 1992, but Russia's interest in inducing South Korean businesses to establish joint ventures in the automotive, shipbuilding, and heavy machinery industries is expected to promote a slow expansion of trade over the next decade. Samsung, one of South Korea's largest chaeböl, has plans to make significant investments in heavy industries in Khabarovsk. Samsung will assist in privatizing defense industries in Khabarovsk, including plants that produce munitions, aircraft, ships, and submarines. The two countries will cooperate in the production of automobiles, engines, machinery, and ships. Russia's Myasishchev Aircraft Corporation is interested in a joint venture with Daewoo and Samsung to produce small, medium, and large civil aircraft. South Korean leaders believe that Russian technology and South Korean capital and marketing expertise could lead to commercially viable coproduction agreements by the year 2000.³³

South Korea's plans for investment in Vietnam include proposals for building two steel mills and an automotive assembly plant. Pohang Iron and Steel Company (POSCO) has signed a 50-50

joint venture with Vietnam Pipe Company to build a factory in Haiphong to produce galvanized steel water pipes. The plant will supply 85 percent of Vietnam's demand for steel water pipes when it is completed in 1995. POSCO also has plans to build an electric steel plant at an undisclosed location in Vietnam. Kia Motor Company has begun the construction of an automotive assembly plant with Vietnam Motor Company. The plant will produce 5,000 automobiles and trucks a year both for the Vietnamese market and for export.³⁴

D. Light Industry

In 1993 many of South Korea's labor-intensive light industries--including those producing electronics, textiles, footwear, plastics, rubber, toys, furniture, paper, and other producers of nonmechanical types of consumer goods--were either going out of business or moving their operations overseas. This was because government policies emphasized import liberalization of these markets at home and increased competition with China and other countries for global markets. In 1992 more than 10,000 South Korean businesses declared bankruptcy, most of them small companies involved in light manufacturing. In 1988 there were more than 6,000 South Korean textile companies employing more than 800,000 workers. In 1992 the number of such firms had dropped to 3,600, and the number of workers had decreased to 400,000.³⁵

Electronics products have been South Korea's most successful light industrial export item in recent years--US\$20.1 billion of

electronics equipment were exported in 1992. Industrial electronics constituted 70 percent of these items, including computer components, integrated circuits, and printed circuit boards. Consumer electronics constituted the remaining 30 percent, including videocassette recorders, microwave ovens, and televisions.³⁶

Over the next five years, the government plans to encourage light industries to build modern plants able to compete in domestic and foreign markets with selected products. Seoul will promote joint ventures in developing countries that can support labor-intensive factories. The major textile manufacturers have increased their research and development and acquisition of foreign technology for products such as antistatic, antimold, and fast-drying synthetic fibers.³⁷ Electronics producers are conducting research on technologies of the future, such as 256-megabyte dynamic random access memory (DRAM) chips, reduced instruction-set computing integrated circuits (RISC), and laser-based video cameras.

Since 1986 light industries have been the largest component of South Korea's investment in offshore operations. South Korea has been most active in relocating its light industries to Thailand, the Philippines, Indonesia, China, and Vietnam. In 1992 some 500 light industrial plants were constructed overseas with South Korean investments valued at US\$1.25 billion.³⁸

E. Social Welfare

In 1992 government spending on social welfare, including

education, health, police, sanitation, and social security, was valued at US\$84 billion, or 30 percent of GNP.³⁹ Education accounted for 20 percent of the budget. In 1991 there were 18,900 primary and secondary schools and 560 colleges and universities. High schools emphasized mathematics, science, and computer skills, and 40 percent of college students were enrolled in science programs.⁴⁰

In 1993 all South Koreans were eligible for medical insurance programs managed by the government's Medical Insurance Corporation. Employers were required to deduct about 4 percent of a worker's salary for the medical coverage of his or her family. The unemployed, disabled, and elderly were provided for by the government. There were 550 hospitals in cities and 8,260 clinics mostly located in small communities.⁴¹

F. Service Industry

In the early 1990s, South Korea's service industry--including banking, real estate, financial services, insurance, retail trade, tourism, and entertainment--was the fastest growing sector of the economy. In 1991 services employed 23 percent of South Korean workers and accounted for 25 percent of GNP.⁴² The service sector was tightly regulated in the past, and foreign competition with South Korean firms was restricted by the government.

Government banking reforms in the 1980s focused on privatizing banks and expanding financial services. In 1980 there were no privately owned banks or financial institutions in

South Korea. In 1989 there were 297 privately owned financial service organizations, including 11 national banks, 237 savings and loans institutions, 24 life insurance companies, and 25 securities companies.⁴³

In 1993 Kim Yong Sam proposed the elimination of all government controls of banking over a five-year period. South Korean banks were still recovering from the economic crisis of the 1980s. Poor investment decisions by banks had caused the government to pass special legislation in 1985 temporarily increasing government monitoring of all bank loans. Whereas the government planned to allow foreign banks to open branches throughout the country, it is unlikely this will be allowed until South Korean banks are financially sound.

During the next five years, foreign companies will--for the first time--be allowed to establish branches throughout the country and compete with South Korean companies in service industries, including hotels, gas stations, department stores, and insurance. Currently, foreign companies must form partnerships with South Korean firms in most of the service sector. The Kim Yong Sam administration plans to open 133 service industries to foreigners, allowing them to purchase land and own 100 percent of their businesses.⁴⁴

G. Energy

In 1993 electricity was provided by the state-owned Korea Electric Power Corporation (KEPCO) and was available in all but a few rural areas. The consumption of electricity increased about

15 percent annually in the 1980s and is projected to increase at the same rate in the 1990s. In 1991 South Korea had 40 thermal power plants, 26 hydroelectric plants, and nine nuclear power facilities. Nuclear power provided 35 percent of the country's energy needs in 1991, and KEPCO planned to increase that percentage in the future.⁴⁵

H. Agriculture

In 1991 agriculture accounted for 8.1 percent of GNP and was valued at US\$22.7 billion.⁴⁶ In the 1970s and 1980s, the government invested US\$50 billion in improving the livelihood of farmers through mechanization, the introduction of new cash crops, and the use of high-yield grains. In 1988 South Korea produced 6 million tons of rice, 1.3 million tons of barley and grain, 7.6 million tons of vegetables, and 1.7 million tons of fruits.⁴⁷ Although crop yields have steadily increased over the past 20 years, the small size of most farms has prevented farmers from earning a profit. Sixty percent of South Korea's 1.6 million farm households own less than one hectare of land.⁴⁸ The government has provided crop subsidies to boost farmers' earnings and living standards to a level comparable to that of industrial workers.

In July 1992, the National Assembly passed the Land Reform Law to promote the consolidation of farms into cost-effective businesses. This legislation will provide US\$54 billion over 10 years to farmers as payment for participating in mergers or for voluntarily selling their land. During this period, the

government hopes to establish 500,000 farm businesses to produce a variety of value-added agricultural products for the domestic market and for export. It is estimated that the farming population will decrease from 5.7 million persons to 4 million by 1998.⁴⁹

I. Defense Spending

South Korea increased defense spending in the 1980s for two main reasons. North Korea was expanding its armed forces and had moved new armored, light infantry, air, and naval units to areas just north of the Demilitarized Zone (DMZ--see Glossary). Also, although Seoul maintained its close defense relations with Washington, military planners prepared for the possibility that United States forces would one day completely withdraw from South Korea. Between 1980 and 1989, South Korea's defense budget increased from US\$3.8 billion to US\$9.1 billion.⁵⁰ Most of the expenditure was allocated to qualitative improvements in weapons, equipment, and training. South Korea's defense industry produced several types of United States weapons under licensing agreements, including rifles, mortars, antitank weapons, artillery, armored personnel carriers, and tanks. South Korea's shipyards produced domestic versions of United States naval vessels, including frigates, corvettes, patrol craft, and amphibious craft. The South Korean air force purchased United States fighter aircraft, including F-16, F-4, and F-5 models, and assembled several types of attack helicopters.

In 1992 South Korea's defense budget was US\$12.4 billion, or

4.4 percent of GNP. In 1990 the armed forces had 650,000 personnel on active duty and 4.8 million in the reserves. The army comprised three mechanized divisions, 19 infantry divisions, seven special forces brigades, three counterinfiltration brigades, and three air defense brigades. Most of these units were deployed north of Seoul. The air force had eight ground-attack fighter squadrons, four air defense squadrons, one counterinfiltration squadron, one reconnaissance squadron, and five transport squadrons. The navy, whose primary mission was coastal defense, had two submarines, nine destroyers, 29 frigates, 10 minesweepers, and 81 missile boats and patrol craft. A small amphibious squadron had 14 amphibious craft.⁵¹

Seoul's defense planners believed that South Korea must maintain its current force level until North Korea demonstrates a change in its basic policy of preparing for war. In 1992 P'yöngyang's refusal to abide by provisions of the Treaty on the Non-Proliferation of Nuclear Weapons and to allow full inspections of its nuclear facilities heightened tensions on the Korean Peninsula. Unless the political situation changes, South Korea's defense budget will increase by about 5 percent a year through the 1990s. The Kim Yong Sam administration views the stationing of United States forces in South Korea as an effective deterrent that will be needed through the end of the decade. The South Koreans will gradually increase their share of responsibility in the command of the United States-South Korea Combined Forces, but operational control of the Combined Forces

Command will remain the responsibility of the United States until
2000.⁵²

III. NORTH KOREA

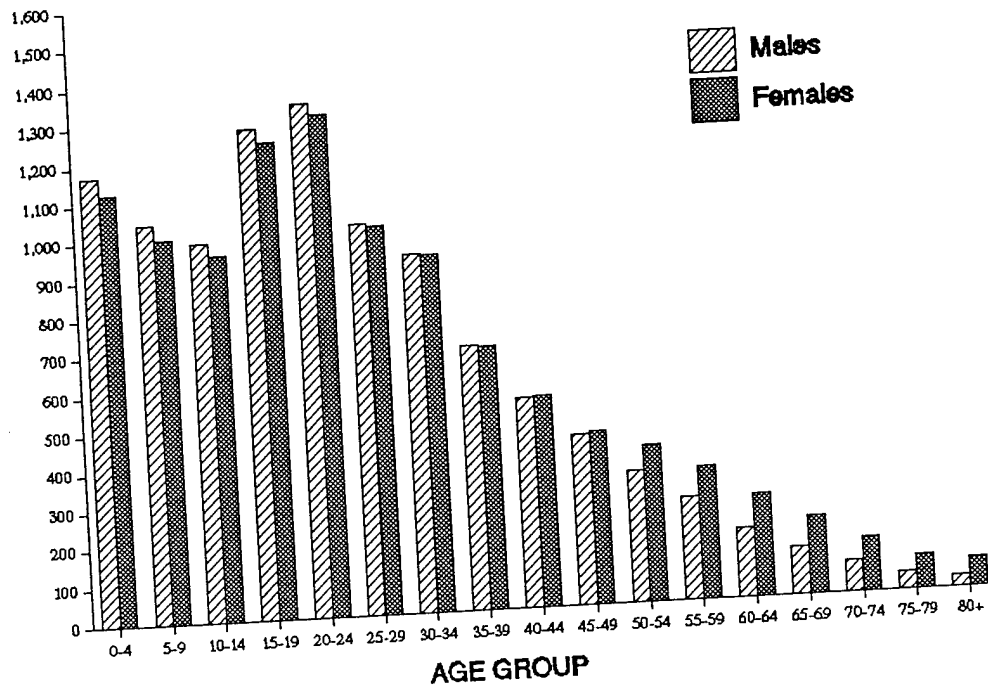
A. Population Trends

North Korea stopped releasing its population data to the world after 1963, leaving more than a 25-year hiatus for various organizations, researchers, and demographers. Estimates had to be made on varying assumptions, which resulted in vastly different figures. Since 1989, when North Korea had to provide some population data to the United Nations Population Fund, the variety of population estimates still differed but were not as disparate. The official population figures reported in 1989, however, excluded all military personnel. Population statistics based on a computer reconstruction that includes military personnel show that the population doubled between 1960 and 1990, increasing from 10.6 million to 21.4 million (see table 4, Appendix).⁵³

Based on the 1990 reconstructed total population of 21.4 million, the population estimate for North Korea was 22.7 million as of July 1993, with a growth rate of 1.9 percent. Unlike South Korea, where males outnumber females, females predominate in North Korea, with a 1990 ratio of 97.5 males for every 100 females. Life expectancy at birth in 1990 was 65.6 years for males and 72.0 years for females.⁵⁴ As the birth rate declines, the number of children under 14 years old decreases. In 1990 persons under age 14 accounted for only 29.4 percent of the total

population, those in the 15-29 age group accounted for 33.8 percent, and those in the oldest group (60 and over) accounted for 5.8 percent, or 2 percent less than those in South Korea (see fig. 4).⁵⁵

Figure 4. North Korea: Population by Age Group and Sex, 1990
(in thousands)

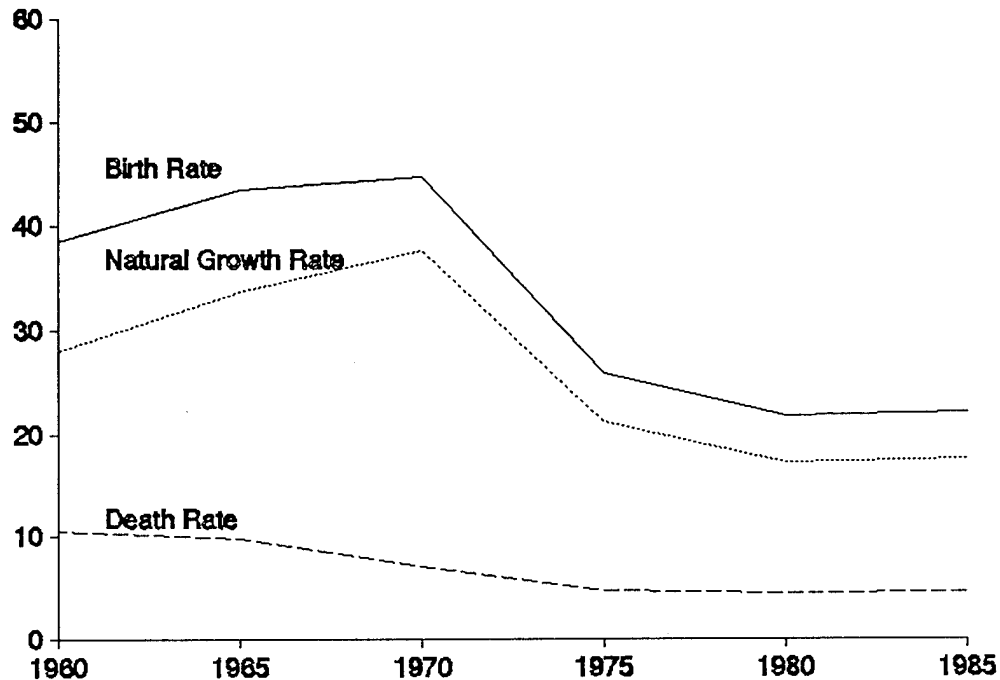


Source: Based on information from Nicholas Eberstadt and Judith Banister, The Population of North Korea, Berkeley, Institute of East Asian Studies, University of California, 1992, 117.

The vital statistics of North Korea show its natural growth rate to have steadily increased up to 1970, reaching 37.7 per 1,000, and then to have steeply declined to 21.2 per 1,000 in 1975. Thereafter, the growth rate gradually decreased to 17.6 per 1,000 through 1985. It increased only slightly to 17.9 in 1986

(see fig. 5).⁵⁶

Figure 5. North Korea: Vital Statistics, Selected Years, 1960-85
(per thousand)



Source: Based on information from Nicholas Eberstadt and Judith Banister, The Population of North Korea, Berkeley, Institute of East Asian Studies, University of California, 1992, 42.

The rate of decline since the 1970s is attributable to a birth control program that has been implemented without fanfare. But the high birth rate of the late 1960s began to show its impact; the increased number of women in the child-bearing age group of 15 to 29 caused the birth rate to rise in 1986. Continued growth is expected through the early 1990s, with subsequent decreases to an average annual rate of 17.0 per 1,000 through the year 2000. On that prognosis, the population of North Korea will reach

25,491,000 by mid-2000.⁵⁷ Using a different set of assumptions, the World Bank projected a population of 25,363,000 by mid-2000.⁵⁸

The North Korean labor force was reported to represent 63.7 percent of its population in 1986 and 64.7 percent in 1987. Nearly all persons over 16 years of age are considered members of the labor force, which comprises four groups: state workers (people doing physical labor in state-owned industrial enterprises), officials, farmers, and co-op workers. Industrial workers in state-owned enterprises predominated, accounting for 56.3 percent of the total workers in 1986 and 57.0 percent in 1987 (see table 5, Appendix). The next largest group was the farmers. "Officials" are defined as government workers doing nonphysical labor, and "co-op workers" are defined as those doing physical labor in cooperative agricultural units.⁵⁹ Women outnumber men in all four occupations, indicating a shortage of men available for civilian activities, probably because many able-bodied men are in military service. It is estimated that 64.7 percent of the population participated in the labor force in 1993 and that 64.3 percent will do so in 2000. The year 2000 will have an aging labor force because the age groups from 30 to 64 will have increased from 51 percent in 1990 to 63 percent.⁶⁰

B. Economic Trends

In 1992 North Korea recorded a decline in GNP for the third consecutive year, from US\$22.8 billion in 1990 to an estimated US\$19.4 billion in 1992.⁶¹ There are several reasons for the

slowdown of the economy. Beijing and Moscow, which have established diplomatic relations with Seoul, also have eliminated economic aid to P'yŏngyang. Most important, they are now requiring payment in cash for exports. Heavy industries, including steel, nonferrous metals, mining, construction, and agricultural machinery, which were developed in the 1960s, have not been modernized. North Korea's light industrial products, such as footwear, clothing, furniture, ceramics, small electrical appliances, and hand tools, are not competitive in international markets. It is estimated that North Korea allocates more than 25 percent of its GNP each year for defense spending. This expenditure reduces the funds available for economic development. Finally, the Kim Il Sung regime has staked its existence on the ideology known as chuch'e (see Glossary), or self-reliance. North Korea's inability or unwillingness to adapt to international business practices frequently has discouraged foreign businesses from investing in the country.⁶²

P'yŏngyang's major trading partners in 1991 included China, Japan, Russia, South Korea, and Iran. China, Russia, and Iran supplied approximately 3 million tons of oil. According to the Economist Intelligence Unit, North Korea provided Iran with 100 SCUD missiles to pay for the oil imported from that country.⁶³ All of North Korea's trading partners require payment in hard currencies, such as United States dollars, German marks, and Japanese yen. Between 1989 and 1991, North Korea's total foreign trade decreased almost by half, going from US\$4.8 billion in 1989

to US\$2.6 billion in 1991.⁶⁴

President Kim Il Sung remains committed to perpetuating central planning and strict controls over all aspects of political, economic, and social life in North Korea. In his January 1993 New Year's address, Kim Il Sung said: "Whenever our people have been faced with a challenge, they have advanced while highly upholding the chuch'e-oriented revolutionary banner. By vigorously waging struggle, they have achieved a brilliant success in socialist construction."⁶⁵ There was no mention in the speech of promoting foreign trade or foreign investment in North Korea.

Kim Il Sung has designated his son Kim Jong Il as his successor. This plan appears to have precluded the possibility of major economic reforms in the next decade, unless the current regime is deposed by a coup or by a people's revolt. Kim Jong Il, who reportedly has taken charge of the day-to-day administration of the government, has claimed responsibility for several of P'yöngyang's mass mobilization programs for relieving the scarcity of food and consumer goods. However, every sector of the economy has declined in recent years as a result of P'yöngyang's iconoclastic rejection of market economics.

C. Heavy Industry

North Korea's heavy industries are state-owned and are concentrated in the major cities, including P'yöngyang, Namp'o, Haeju, Sinŭiju, Wönsan, Hamhŭng, Sinp'o, Kimch'aek, and Ch'öngjin. The government has invested heavily in steel, mining,

agricultural, industrial, and construction machinery, trucks, railroad cars, shipbuilding, chemicals, and cement. Steel, coal, zinc, lead, gold, silver, cement, and small machines, including lathes, mining drills, and machine tools, are important exports.

In 1992 most of North Korea's state-owned industrial plants only operated at 60 percent or less of capacity. Shortages of electricity and oil throughout the country reduced the hours of operation at factories and precluded the timely delivery of materials to and from factories. The deterioration of North Korea's foreign trade influenced factory managers to limit production to satisfy domestic quotas.⁶⁶

North Korea does not publish annual production statistics. Nonetheless, targets are set, and on occasion, production figures are reported by the press. North Korea's Third Seven-Year Plan (1987-93) established the following production goals for selected industries: 120 million tons of coal; 10 million tons of steel; 7.2 million tons of chemical fertilizers; 1.7 million tons of nonferrous metals; and 22 million tons of cement. In 1989 North Korea only produced 52 million tons of coal, 8 million tons of steel, 800,000 tons of chemical fertilizers, 450,000 tons of nonferrous metals, and 10 million tons of cement, suggesting the targets of the Third Seven-Year Plan were unrealistic.⁶⁷

North Korean heavy industries were supposed to provide each sector of the domestic economy with various types of machinery and equipment. Factories were built with assistance from foreign countries after 1953, but only a few have been modernized to

standards comparable to those found in South Korea. In general, North Korea manufactured in 1993 the types of machines and heavy equipment that were produced in the former Soviet Union in the 1960s.

In December 1991, North Korea's State Administration Council announced that a free economic and trade zone would be established in North Hamgyŏng Province in an area extending from the port city of Najin north to the Russian border. In 1992 the United Nations Development Programme sponsored several meetings to encourage the inclusion of the North Korean project as part of a multinational development of the Tumen River region.⁶⁸ As of September 1993, the plan was still in the developmental stage.

In January 1993, North Korea's Supreme People's Assembly passed the Free Economic and Trade Zone Law. The law encourages foreigners to invest in heavy industries and promotes the construction of new factories. Under the law, foreigners are allowed 100 percent ownership of the plants they build. P'yŏngyang is willing to reduce taxes and customs duties for foreign businesses that invest in modernizing North Korea's plants and infrastructure.⁶⁹ However, it is unlikely that many foreign businesses will be interested in P'yŏngyang's plan for at least several years. The ports, roads, and railroads must first be improved to accommodate international commerce. P'yŏngyang has said it will spend US\$4 billion on improving the infrastructure in the trade zone, but it may take years for this to be accomplished. Finally, until P'yŏngyang improves its political

relations with South Korea, Japan, Russia, China, and the United States, it is unlikely to attract a significant amount of foreign interest in its free economic and trade zone.

D. Light Industry

In the 1980s and early 1990s, the North Korean press frequently discussed the need to expand light industry to meet the requirements of the people for clothing and consumer goods. Most light industrial factories are administered by provincial and local government officials. Until 1985 many believed that a lack of central funding for these plants prohibited increases in production to meet demands. In 1985 the government established new guidelines for the management of light industries that allowed factory managers to assume more responsibility for production decisions. Under the independent accounting system, P'yŏngyang provided these factories with funds at the beginning of the year, and the managers were allowed to invest in machinery and equipment, oversee the distribution of products, and provide incentives for workers.⁷⁰ In 1993 analysts believed that these factories produced about 80 percent of North Korea's consumer goods.

Approximately 10 percent of light industrial production is performed in homes and small workshops under a program known as the August Third People's Consumer Goods Production Movement. According to a January 1990 article in Külloja (The Worker), more than 100,000 North Koreans are employed in these workshops and produce soap, paper products, kitchen utensils, clothing,

toys, and many other goods for sale in local markets. North Korea also has permitted members of Choch'ongryon--Japanese of Korean descent who are known to be loyal to the regime--to build factories in North Korea. These businesses provide about 10 percent of the country's light industrial needs. In 1993, 85 of these Japanese businesses produced goods for sale in North Korea. Their products included clothing, soft drinks, small engines, bicycles, electronic calculators, color television sets, videocassette recorders, motorcycles, and automobile batteries.⁷¹

E. Social Welfare

In 1993 it is estimated that North Korea budgeted about US\$3.5 billion for social welfare programs, including education, public health, police, and other services. North Korea has approximately 4,300 public schools, 473 vocational academies, and 281 colleges and universities.⁷² The quality of education is believed to be significantly lower than that available in South Korea. Fifteen percent of high school graduates go on to college; most of these students are chosen on the basis of their loyalty to the regime rather than their academic qualifications. Adequate health services are available to all citizens, but medicines are reported to be in short supply. North Korea has approximately 2,500 hospitals in cities and counties and 5,400 clinics in towns and small communities.⁷³ The government provides housing for all North Koreans. Two-story apartment buildings are common in the rural areas, and high-rise apartment buildings predominate in cities. Rents are determined by the location of the housing unit

and wages of workers in the family. An average family of five with two working adults pays one-fourth of its income in rent.⁷⁴

F. Service Industry

The North Korean government has attempted to provide adequate services. But there are signs that the Kim Il Sung regime, after 45 years in power, has failed to develop retail stores, banks, and other basic services available in industrialized countries. In 1992 P'yöngyang was encouraging local governments to establish more state-owned stores for selling consumer goods. Apparently, black markets have become common in town plazas, railroad stations, and other places. The existence of the black markets indicates that North Korea has failed to increase the production of consumer goods in quantities sufficient to meet demand. There are five state-owned banks with branches throughout the country. Additionally, the State Insurance Bureau issues life, fire, and accident insurance policies. However, it is believed that most of the disposable income North Koreans have is spent on food, housing, clothing, home furnishings, and consumer goods. It is estimated the average family may save a small percentage of income, perhaps 5 percent.⁷⁵

G. Energy

In 1993 North Korea continued to have a serious energy crisis. This shortage both affected the supply of electricity and led to staggered industrial production schedules. North Korea's hydroelectric, coal, oil, and nuclear power plants produced 56

billion kilowatt-hours of electricity in 1992. It is estimated that 75 billion kilowatt-hours of electricity are needed to satisfy demand. Sixty percent of North Korea's power is provided by hydroelectric plants, 30 percent by coal, and the remaining 10 percent by oil and the country's single nuclear power plant. Several hydroelectric and coal power plants are under construction, and all are expected to be operational by 1995.⁷⁶ It is not clear if these plants will produce the 20 billion kilowatt-hours of electricity needed to meet demand.

Gas rationing has become necessary because Russia and China both require North Korea to pay the full market price for oil purchases. P'yŏngyang has been unable to afford to purchase enough oil for industry and gasoline for motor vehicles. It is reported that in addition to rationing, the government has prohibited the operation of motor vehicles on Sunday.⁷⁷ This problem will continue until P'yŏngyang is able to expand its foreign trade.

H. Agriculture

In the 1980s, North Korea claimed to be self-sufficient in food production. Land reclamation and terracing had expanded the area of farmland, new strains of rice and other grains had increased crop yields, and irrigation, fertilization methods, and mechanization had improved. In 1986 approximately 7.8 million North Koreans were employed in agriculture. There were about 3,800 cooperative farms and 180 state farms. Rice and corn were the two major grain crops.⁷⁸ In 1986 the harvest of rice and corn

was 6 million tons and 2.7 million tons, respectively. Other major grains included barley, millet, sorghum, and oats. More than 2 million tons of potatoes were produced in 1986. The government was increasing its support for raising livestock.⁷⁹

In 1991 North Korea was reported to have had its poorest harvest since the early 1970s. Rice and corn production were estimated at 1.6 million tons and 2.1 million tons, respectively, in 1991. Several factors were said to have contributed to the poor harvest. The government reclaimed 3 million hectares of farmland for highway and other construction projects. Poor-quality fertilizers, insufficient use of insecticides, and inadequate provisions for the storage and transport of crops were also said to have been problems.⁸⁰ The seriousness of the situation was aggravated by another poor harvest in 1992, when total grain production was reported to have been 4.8 million tons.⁸¹ The amount of grain needed to adequately meet annual demand was estimated at 6.5 million tons. To meet demand, North Korea purchased 1.2 million tons of grain in 1991 from China, Canada, and Australia and may have made similar purchases in 1992.

The failure of North Korean agriculture represents a political crisis that, if unresolved, will result in a steady increase in civil disorders. The Kim Il Sung regime has asked the people to eat two meals a day rather than three. It is estimated that annual per capita grain consumption decreased from 500 kilograms in 1989 to 350 kilograms in 1992.⁸² Japanese of Korean

descent with relatives in North Korea report that angry citizens have organized mass demonstrations. One report claimed that citizens of Unbong, near North Korea's border with China, had taken sticks and overpowered armed guards at a grain storage facility. United States satellites have detected North Korean troop movements to areas where their only purpose would be for riot control and for protecting government property.⁸³ Kim Il Sung is depending on the army to maintain civil order until the current economic crisis is over. However, if the government is unable to increase food supplies and reduce the shortages of fuel, electricity, and basic consumer goods, it is unlikely that the army will remain loyal to the two Kims.

I. Defense Spending

North Korea consistently increased defense spending as GNP grew in the 1970s and 1980s. When GNP declined after 1988, the government continued to increase the percentage of GNP spent for defense. From 1977 to 1987, P'yöngyang allocated about 22 percent of GNP annually to defense while GNP increased from US\$19.4 billion to US\$25.9 billion.⁸⁴ In 1991 GNP had decreased to US\$23 billion, and the percentage budgeted for the armed forces rose to 26 percent.⁸⁵ With a further decline in GNP to US\$19.4 billion in 1992, it was estimated that P'yöngyang increased defense funding to 27 percent in order to meet the military budget for that year, estimated at US\$5.3 billion. These expenditures suggest that as long as Kim Il Sung is alive and politically active, the military budget will not decrease to ease

the economic problems in other sectors.

North Korea has carefully planned its defense spending to establish superiority over South Korea in the number of military personnel. In 1990 the North Korean army had 930,000 personnel compared with South Korea's 550,000. The North Korean air force had 70,000 personnel compared with South Korea's 40,000. The North Korean navy, however, was smaller than the South Korean navy, with 40,000 naval personnel compared with South Korea's 60,000. This suggests that P'yŏngyang considers the AirLand Battle doctrine as the key to victory in a future conflict on the Korean Peninsula. There are 5.5 million North Koreans in reserve units compared with 4.8 million persons in South Korea.

North Korea has also sought to establish superiority in weaponry. The North Koreans have advantages in tanks, armored personnel carriers, field artillery, air defense artillery, and mortars. North Korea has 3,500 tanks compared with South Korea's 1,500. P'yŏngyang has 1,940 armored personnel carriers and Seoul has 1,500. North Korean army units are equipped with 7,200 pieces of field artillery, whereas the South Korean army has 4,000. North Korea's 8,000 air defense guns give it a 13:1 advantage over South Korea. North Korea's 750 fighter aircraft represents a numerical advantage, although most of P'yŏngyang's air power is obsolescent. South Korea has 480 fighter aircraft. Approximately 130 of North Korea's aircraft are Russian models designed after 1970. They include the MiG-29, MiG-23, and the Su-25. P'yŏngyang also has 400 Russian and Chinese models of the MiG-19 and MiG-

21.⁸⁶

North Korean leaders believe that the armed forces and the people will continue to support the government's insistence on maintaining self-reliance. P'yŏngyang's development of long-range SCUD missiles, the likelihood that it is close to producing or has produced a nuclear weapon, and the continued assembly of various types of weapons and military equipment at a time when civilian industries are in decline are indications of their resolve to strengthen the military. Kim Il Sung stated in his 1993 New Year's address: "Last year the imperialists and reactionaries persistently maneuvered to isolate and suffocate our Republic--the stronghold of socialism--and to eradicate our socialist cause. They were unable to block our people's march."⁸⁷

IV. VULNERABILITY OF NORTH KOREA TO ECONOMIC SANCTIONS OR AN ECONOMIC BLOCKADE

A decision by the United Nations Security Council to impose economic sanctions or an economic blockade against North Korea would have a catastrophic effect on North Korea's economy. North Korea's food and energy shortages, its inability to produce adequate amounts of such basic necessities as clothing, medicines, soap, and cooking supplies, and its geopolitical position in Northeast Asia would make it difficult for P'yŏngyang to sustain even those activities essential to supporting its 23 million people. Economic sanctions would require the support of South Korea, China, and Russia, which have common borders with North Korea. These nations have been primary suppliers of food, oil, and other essential goods.

It would not be difficult to impose a maritime embargo to interdict ships traveling to and from North Korea. There are seven major ports on the east coast and five on the west coast. Ships approaching the east coast must go through the Korea Strait to the south or the Sea of Japan to the east. United States vessels and other United Nations vessels would have access to South Korean and Japanese ports and would receive logistical support from these nations. The Yellow Sea on the west coast is patrolled by the Chinese People's Liberation Army Navy, and China's cooperation would be necessary to enforce an embargo of North Korea's west coast ports.

The most probable response by the Kim Il Sung regime to an economic embargo or economic sanctions would be to tighten controls over the population. The government would likely claim that the United States, South Korea, and Japan were planning to humiliate the North Korean people, as they have in the past. The people would be asked to remember the hardships faced during Japan's occupation of Korea from 1910 to 1945. P'yöngyang would mobilize the armed forces, and all able-bodied citizens would be asked to participate in military and civil defense exercises. Living standards would be utilitarian, and rationing would be imposed for the duration of the crisis.

North Korea's unpredictability in the past suggests that several outcomes would be possible after economic sanctions or an economic embargo went into effect. Kim Il Sung could choose to keep North Korea in seclusion and at the same time provide offers to meet some, but not all, of the United Nations demands. In the worst-case scenario, if the government were no longer able to provide the people with the minimal requirements of food, it is probable that Kim Il Sung would negotiate an agreement in order to stay in power. However, it is possible that P'yöngyang would choose to initiate military actions, most likely against South Korea.

V. ECONOMIC IMPACT OF REUNIFICATION

A. General

South Korean and foreign economists agree that South Korea would bear most of the costs of reunification, just as West Germany has imposed higher taxes and reduced some government services to accommodate the costs of German reunification. Estimates of the total cost to South Korea range from US\$328 billion to US\$980 billion. The low estimate includes only the investments needed to modernize North Korea's infrastructure and light, heavy, service, and agricultural sectors.⁸⁸ The high figure includes additional costs, such as privatizing state-owned factories, currency conversion, unemployment, health care, and education.⁸⁹ It has been reported that the South Korean government has had a reunification relief fund since 1989. The establishment of this fund has not been publicized because government officials have maintained that they are not interested in absorbing North Korea in the way West Germany absorbed East Germany.

North Korea and South Korea each have proposed a plan for the government of a reunified state. Since the 1970s, P'yŏngyang has favored the establishment of a confederation that would maintain the current political systems in their respective jurisdictions and establish a third government, comprising representatives from north and south, to manage diplomacy and

military affairs and to encourage social, economic, and cultural interchanges between the two regional governments. The North Korean proposal has been opposed by South Korean government officials who argue that the 68 million Korean people cherish their common language, 5,000-year old history, and favor the establishment of one state and one government. Former South Korean president Roh Tae Woo proposed in September 1989 that Seoul and P'yöngyang establish a coalition government to oversee the gradual integration of the two states into a democratic government, with freedom and human rights of all citizens protected under the law.⁹⁰ Predictably, North Korean leaders rejected the idea.

P'yöngyang is also opposed to the two-plus-four formula that would involve the United States, Japan, China, and Russia in reunification talks. The North Koreans maintain that Koreans should determine their own destiny without outside interference-- a position China has publicly supported. In 1993 Beijing appeared to be the only major power having significant political influence with P'yöngyang. Chinese leaders were encouraging North Korea to adopt pragmatic economic policies that would promote foreign investments and joint ventures with industrialized countries without displacing the existing political system. Political exchanges between North Korea and South Korea have, at times, been focused on the development of this type of economic cooperation. In December 1991, the two Koreas signed the Agreement on Reconciliation, Nonaggression, Exchanges, and

Cooperation. Article 15 of this document provided that the two sides would cooperate in the joint development of their economies and would normalize trade relations.⁹¹ In 1993 P'yöngyang continued to indicate its interest in having South Korean businesses build and manage factories in several North Korean cities. Kolon, a South Korean firm, has already constructed a plant to produce knapsacks in P'yöngyang.⁹² South Korean leaders have stated they are prepared to authorize additional joint ventures after North Korea demonstrates it is complying with the Treaty on the Non-Proliferation of Nuclear Weapons.

B. Korean Peninsula

If the death of Kim Il Sung, or some other political crisis in P'yöngyang, resulted in an insurrection that removed the Korean Workers' Party from power, South Korean president Kim Yong Sam probably would substantially change his economic policies to accommodate the annexation of North Korea. In this scenario, millions of North Koreans would be unemployed for several years, as party officials, military personnel, and workers in obsolescent factories would have to be retrained for new jobs. The South Korean government would encourage the chaeböl to assist in reorganizing North Korean industries, with the short-term goal focused on improving the standard of living in North Korea and the long-term goal oriented to promoting foreign investment and export industries. The international community would likely assist Seoul by providing humanitarian aid and loans. Millions of Koreans living in foreign countries would send financial

contributions to Seoul. Most of the costs, however, would be paid by South Koreans.

The case of Germany provides some indication of the economic burdens South Korea would experience in the event of a sudden collapse of North Korea. In October 1990, East Germany became part of the expanded Federal Republic of Germany.⁹³ The government funds allocated to cover reunification have averaged over US\$50 billion a year. The amount budgeted for 1993 was US\$57.5 billion.⁹⁴ The level of unemployment in East Germany was 14 percent in 1992, and unemployed workers received US\$12 billion in payments. Government expenditures to modernize factories were estimated at US\$12 billion a year. More than 1.4 million East Germans have moved west, which has increased unemployment and the demand for social services there. West Germany usually had a positive trade balance before 1991, but it had deficits in 1991 and 1992. In 1992 GNP grew by 1.9 percent, which was significantly lower than the growth rate of 3.5 percent recorded in 1991.⁹⁵

South Korea would be absorbing a population of 23 million people and a land area of 120,540 square kilometers. The costs of reunification would be high, and South Koreans would be paying to provide for North Koreans until the economy in the north stabilized. South Korea's Ministry of Finance estimates that reunification would cost US\$980 billion, or approximately US\$2,279 for each South Korean.⁹⁶ The growth of GNP would decline as a result of the dynamic changes taking place in Korea.

However, South Korean businesses could be expected to move quickly to build new plants in North Korea, and GNP would likely increase again after one or two years. The Korea Development Institute, a South Korean government-affiliated think tank, predicted that 10 years after reunification, the productivity of businesses in North Korea would be about 60 percent of those in South Korea.⁹⁷

A second scenario for reunification would involve the gradual economic integration of the two states. South Korean businesses would increase their investments in North Korea, and the two governments would slowly expand confidence-building measures to reduce the danger of war and to promote social contacts between North Koreans and South Koreans. The North Korean government has indicated a willingness to alter its longstanding policy of banning South Korean companies from operating in North Korea. Within the framework of the December 1991 Agreement on Reconciliation, Nonaggression, Exchanges, and Cooperation and the January 1993 Free Economic and Trade Zone Law, P'yŏngyang has guaranteed that South Korean businesses will be given equal status with other foreign states. P'yŏngyang currently views joint economic ventures as an acceptable departure from chuch'e. However, P'yŏngyang's refusal to fully cooperate with the International Atomic Energy Agency concerning its nuclear inspections has caused the Kim Yong Sam administration to place a moratorium on these joint ventures until North Korea has demonstrated it is complying with the

Treaty on the Non-Proliferation of Nuclear Weapons.

The massive scale of the proposed projects involving the two Koreas suggests that once inter-Korean economic cooperation is established, it will lead to the construction of several hundred modern industrial plants in several North Korean cities over the next 10 years. North Korean deputy premier Kim Dal-Hyon and the chairman of South Korea's Daewoo conglomerate have agreed to a plan for Daewoo to construct nine factories on a 1 million-square-meter site in Namp'o. The Daewoo factories would produce clothing, shoes, tableware, and other consumer goods.⁹⁸ According to the United Nations Industrial Development Organization, P'yöngyang wants to become involved in producing and exporting electronic products. South Korea's Samsung and Goldstar chaeböl are eager to produce electronics equipment in North Korea.⁹⁹ Other industries in which South Korean know-how and cheap North Korean labor would provide possible mutual benefits are textiles, mining, chemicals, steel, metals, machinery, electrical appliances, and shipbuilding. It is envisioned that within 10 years, South Korean firms would be conducting normal business operations in several North Korean cities, including P'yöngyang, Namp'o, Huich'ön, Sunch'ön, Sinüiju, Wonson, Hamhüng, Kimch'aek, Ch'öngjin, Najin, and Sönbong.

The 1991 Agreement on Reconciliation, Nonaggression, Exchanges, and Cooperation provides the framework for the two Koreas to eventually establish an economic union. Article 23 of the agreement provides for an economic cooperation committee.

Joseph Chung, an American economist, believes that the gradual expansion of economic integration would lead to the creation of an economic union, similar to the European Community, and finally to a political union. Chung suggests that in this scenario, the economic development of North Korea would occur over a long period of time and that the costs of reunification would be reduced as a result of cooperative economic development in the period preceeding reunification.¹⁰⁰

C. Asia and the Pacific

The end of the Cold War and the dissolution of the former Soviet Union reduced political tensions throughout the region. The peaceful reunification of North Korea and South Korea would contribute to this trend and would augment the new economic dynamism that has made Asia the world's fastest growing economic region. One of the most evident economic advantages of reunification would be the opening of roads and railroads from South Korea to China and Russia. South Korea's US\$10 billion of trade with these two countries would likely increase after reunification. As part of a reunified Korea, residents of North Korea would benefit from new employment opportunities. North Korean ports would be expanded. Namp'o on the west coast would be used for shipping exports to China and Southeast Asia. Wönsan, Ch'öngjin, and other east coast ports would be used as transit points for Russia, Japan, and North America. Additionally, it is likely that Japan, Taiwan, and other Asian states would expand trade with and increase investment in a reunified Korea.

D. Global Impact

South Korea's successful development of a worldwide trade network would provide a reunified Korea with an excellent base for the continued expansion of Korean businesses in foreign countries. South Korea is expected to join the Organisation for Economic Co-operation and Development in 1996. Seoul's excellent credit rating with commercial banks in industrialized countries could also be beneficial in inducing foreign participation in modernizing northern industries. Former President Park Chung Hee was able to use this strategy in the 1960s and 1970s to accelerate the rate of industrialization.

North Korea's ties to developing countries could facilitate the development of a reunified Korea's trade with Third World nations. P'yongyang has good relations with Burma, Cambodia, Cuba, India, Iran, Mozambique, Namibia, Uganda, Zimbabwe, and several other developing nations. North Korea is a member of the Nonaligned Movement, an organization that promotes political and economic cooperation among its 100 members.

It is likely that a reunified Korea would be more successful than P'yongyang in promoting multinational cooperation in projects such as the Tumen River Area Development Project, which was originally proposed by the United Nations Development Programme in 1991 to expand mining industries, manufacturing, and trade in the area including China's Jilin Province, Russia's eastern region, and the Korean Peninsula. In 1993 the Korea Economic Institute of America published a report on the future of

the economy of South Korea that included an analysis of the economic benefits for United States businesses if the Tumen River Area Development Project were to succeed in opening up vast areas of North Korea, Siberia, and northeastern China. The report concluded: "Of the five East Asian sub-zones that economists have identified, Northeast Asia--consisting of Japan, North and South Korea, northeast China, and the Russian Far East--is the one with the greatest potential, potential which will likely start to materialize by the end of the decade. It is, thus, the sub-zone which warrants closest examination by American business. It is the one which is nearest to the United States geographically, and the countries that make it up, individually, have the largest and most important foreign commercial links with corporate America."¹⁰¹

North Korean leaders are aware of the economic potential of developing the ports of Ch'ŏngjin, Najin, and Sŏnbong as gateway cities that could provide foreign companies with direct access to a region that is rich in oil, gas, coal, minerals, and other valuable resources. However, it is unlikely that many foreign businesses will choose to invest in North Korea's Najin-Sŏnbong Free Economic and Trade Zone because of P'yŏngyang's insistence on controlling contacts between North Koreans and the outside world. The reunification of Korea would remove this impediment, and the leaders of the new nation are likely to encourage the Tumen River Area Development Project as part of their plan to reduce the costs of promoting the economic development of North

Korea and integrating the area into the global economic system. China's experience in establishing special economic zones in coastal cities has been the driving force of its economic modernization over the last decade. The northeastern coast of Korea could grow to become as important to a reunified Korea as the South Korean cities of Seoul and Pusan.

The growth of economic interdependence and global trade has changed the political map of the world over the last 40 years, and the current expansion of economic cooperation between China, former communist nations, and the West could bring new prosperity to millions of people worldwide. The Korean Peninsula is in the center of one of the fastest developing regions of the world. South Koreans have the interest and experience that will be needed to assist North Korea's opening up to the world. The reunification of North Korea and South Korea would benefit the 68 million Koreans, and it would end the threat of war that has existed since the 1953 armistice formally ended the Korean War. Now it is up to P'yöngyang to choose between isolationism and the politics of accommodation with South Korea.

GLOSSARY

chaebŏl--Korean translation of the Japanese word zaibatsu, or business conglomerate.

chuch'e--The political ideology promulgated by Kim Il Sung. The application of Marxism-Leninism to the North Korean experience based on autonomy and self-reliance.

DMZ--Demilitarized Zone. The four-kilometer-wide buffer zone along the approximately 241-kilometer-long Demarcation Line marking the border between North Korea and South Korea.

GNP--gross national product. The total value of all goods and services produced by an economy in a given period, usually a year, plus income from overseas investments, less the earnings of foreign investors in the economy.

APPENDIX

Table 1. South Korea: Population by Sex, Selected Years, 1960-90

Table 2. South Korea: Economically Active Population by Sector, 1990

Table 3. South Korea: Labor Shortage by Industry, 1989, 1990, and 1991

Table 4. North Korea: Population by Sex, Selected Years, 1960-90

Table 5. North Korea: Economically Active Population by Occupation and Sex, 1987

Table 1. South Korea: Population by Sex,
Selected Years, 1960-90*
(in thousands)

Year	Males	Females	Total
1960 (December 1)	12,544	12,445	24,989
1966 (October 1)	14,702	14,491	29,193
1970 (October 1)	15,796	15,670	31,466
1975 (October 1)	17,461	17,245	34,706
1980 (November 1)	18,767	18,669	37,436
1985 (November 1)	20,244	20,205	40,449
1990 (November 1)	21,845	21,675	43,520

* Census figures.

Source: Based on information from Korea Statistical Yearbook, 1991, Seoul, Korean Statistical Association, 1991, 35.

Table 2. South Korea: Economically Active Population
by Sector, 1990

Sector	Economically Active Population (in thousands)	Percentage of Total
Agriculture	3,292	18.3
Construction	1,339	7.4
Manufacturing	4,847	26.9
Mining	81	0.4
Other*	8,477	47.0
TOTAL	18,036	100.0

* Includes services.

Source: Based on information from Korea Statistical
Yearbook, 1991, Seoul, Korean Statistical
Association, 1991, 74.

Table 3. South Korea: Labor Shortage by Industry,
1989, 1990, and 1991*
(in percentages)

Industry	1989	1990	1991
Apparel	9.7	15.0	18.1
Furniture	9.7	8.4	15.5
Leather	6.3	22.7	14.9
Machinery	7.0	8.4	11.1
Metals, fabricated	6.6	7.6	10.9
Metals and mining	4.3	5.2	16.3
Rubber	4.7	4.9	10.4
Transportation, inland	2.2	5.2	9.0
All industries	4.9	6.9	9.1

* Labor shortage refers to those positions in an industry that management has been unable to fill because of insufficient numbers of applicants.

Source: Based on information from Business Korea [Seoul], January 1992, 35.

Table 4. North Korea: Population by Sex,
Selected Years, 1960-90
(in thousands)

Year	Males	Females	Total
1960	5,094	5,475	10,569
1965	5,894	6,278	12,172
1970	7,012	7,376	14,388
1975	8,070	8,410	16,480
1980	8,838	9,161	17,999
1985	9,650	9,952	19,602
1990	10,568	10,844	21,412

Source: Based on information from Nicholas Eberstadt and Judith Banister, The Population of North Korea, Berkeley, Institute of East Asian Studies, University of California, 1992, 34.

Table 5. North Korea: Economically Active Population
by Occupation and Sex, 1987
(in thousands)

Occupation	Males	Females	Total
Farmers	1,312	1,855	3,167
Officials	879	1,224	2,103
State workers	3,134	4,001	7,135
Co-op workers	42	70	112
TOTAL	5,367	7,150	12,517

Source: Based on information from Nicholas Eberstadt and Judith Banister, The Population of North Korea, Berkeley, Institute of East Asian Studies, University of California, 1992, 80.

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